National Climatic Data Center

DATA DOCUMENTATION

FOR

Monthly Climatic Data for the World TD3500

June 16, 1997

National Climatic Data Center
151 Patton Ave.
Asheville, NC 28801-5001 USA

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1. Data Set ID: TD3500

2. Data Set Name:

MONTHLY CLIMATIC DATA FOR THE WORLD SURFACE & UPPER AIR

3. Data Set Aliases:

MCDW SURFACE & UPPER AIR

4. Access Method and Sort for Archived Data:

MANUAL AND TAPE NOTATIONS

1. File Fixed Length

A. Physical Characteristics
Data in this file are retained in chronological order by stations.

NCDC Library Tapes are structured as follows:

Record Length	: Fixed 500 Character
Block	: Fixed 5000 Character
Media	: ASCII 18-Track IBM 3480 Cartridges
Density	: 36,000 BPI
Parity	: Odd
Label	: ANSI Standard Labeled
File	: 1 File per Cartridge

B. COBOL or FORTRAN Description

(1) Typical ANSI COBOL

```
IDENTIFICATION DIVISION.
PROGRAM-ID. CRDWT3500.
* This Program Reads TD3500 Data and lists it on a
* printer.
ENVIRONMENT DIVISION.
CONFIGURATION SECTION.
SOURCE-COMPUTER.  UNIVAC-1100.
OBJECT-COMPUTER.  UNIVAC-1100.
INPUT-OUTPUT SECTION.
```

```
 FILE-CONTROL.
   SELECT INDATA ASSIGN TO INTERCHANGE.
 DATA DIVISION.
 FILE SECTION.
 FD INDATA
    LABEL RECORDS ARE STANDARD
    RECORDING MODE IS F
    BLOCK CONTAINS 5000 CHARACTERS
    DATA RECORD IS DATA-RECORD CONTAINS
    100 CHARACTERS.


 01 DATA-RECORD.  (SURFACE DATA ONLY)
    02 RECORD-ID.
       03 SFC-DES      PIC X.
       03 WMO-STA      PIC X(6).
       03 PERIOD       PIC X.
       03 YEAR         PIC X(4).
       03 MONTH        PIC X(2).
       03 FILLER       PIC X(6).
       03 WMO-REGION   PIC X.
       03 DAYS-OBS     PIC X(2).
       03 STA-PRESS    PIC X(5).
       03 SEA-LEV-PRES PIC X(5).
       03 IND-SEA-LEV  PIC X.
       03 MEAN-TEMP    PIC X(4).
       03 DEP-MEAN     PIC X(5).
       03 MEAN-VAPOR   PIC X(3).
       03 DEP-VAPOR    PIC X(4).
       03 DAY-PRECIP   PIC X(2).
       03 TOTAL-PRECIP PIC X(4).
       03 DEP-PRECIP   PIC X(5).
       03 PREC-QUINT   PIC X.
       03 SUN-DURAT    PIC X(3).
       03 SUN-PERC     PIC X(3).
       03 MEAN-SEA     PIC X(4).
       03 DEP-MEN-SEA  PIC X(4).
       03 FLAGS        PIC X(8).
       03 FILLER       PIC X(16).
*
 WORKING-STORAGE SECTION.
*
 01 RECORD-CT          PIC 9(5) COMP.
 01 PRCT               PIC 9(5) COMP.
*
 PROCEDURE DIVISION.
*
 OPENING.
     OPEN INPUT INDATA.
```

```
READ-REC.
    READ INDATA AT END GO TO ENDALL.
    ADD 1 TO RECORD-CT.
    DISPLAY RECORD-ID UPON PRINTER.
    MOVE 0 TO PRCT.
    PERFORM PRINT-A-RECORD UNTIL EOF.
PRINT-A-RECORD.
    ADD 1 TO PRCT.
ENDALL.
    DISPLAY 'E N D OF R U N' UPON PRINTER.
    CLOSE INDATA.
    STOP RUN.
```

(2) TYPICAL FORTRAN 77

```
 CHARACTER*32 UPHEDR
 CHARACTER*39 UPLEVL (12)
 CHARACTER*100 SFCDAT (5)
 CHARACTER*500 DATA
 EQUIVALENCE (DATA, SFCDAT, UPHEDR)
 EQUIVALENCE (DATA (33:33), UPLEVL)

 READ (1, 1001, END=999) DATA
101  FORMAT (A500)
```

B. FORMAT (FIXED RECORD)

For surface data, each 500 character physical record contains five 100 character logical records. There may be several empty surface records (filled with M's) in the last record containing surface data.

C. List of Variables for Surface Record

	ELEMENT	WIDTH	POSITION
001	SURFACE & Upper Air Designator	1	001
002	WMO Station Number	6	002-007
003	Data Period Type	1	008
004	YEAR	4	009-012
005	MONTH	2	013-014
006	BLANK	6	015-020
007	WMO Region Number	1	021-021
008	Number Days Observations Taken	2	022-023
009	Mean Station Pressure (millibar)	5	024-028
010	Mean Sea Level Pressure (mb) (850 or 700 millibar Level (GPM)	5	029-033
011	Indicator Mean Sea Level Pressure (Blank, Y or Z)	1	034

012	Mean Temperature (Celsius)	4	035-038
013	Departure Mean Temperature Average	5	039-043
014	Mean Vapor Pressure (mb)	3	044-046
015	Departure Vapor Pressure Average(mb)	4	047-050
016	Number Day with Precipitation (1 mm or greater)	2	051-052
017	Total Precipitation (mm)	4	053-056
018	Departure Precipitation Average (mm)	5	057-061
019	Precipitation Quintile	1	062
020	Sunshine Duration (Hours)	3	063-065
021	Sunshine Percent Long-term Average(%)	3	066-068
022	Mean Sea Surface Temperature (Or Blank)	4	069-072
023	Departure Mean Sea Surface Temperature from Average	4	073-076
024	Flags (blank, * or #1)	8	077-084
025	Not Used	16	085-100

NOTES:

Most variables are based on monthly means. Exceptions are precipitation and sunshine duration, which are based on monthly totals.

1. The Surface Designator indicates the following:

   1 = Surface current
   2 = Surface late report
   3 = Surface corrections

2. The Data Period Type indicates whether the data is a single month or some average of months.

   Data Period Type = 1 (Record is a single month and this is the only date period type created by this system)

3. There is space for beginning year and month and ending year and month of the data. For data period type 1, the beginning year and month are sufficient, therefore bytes 15-20 are blank.

4. The following is a list of the surface variables:
   Mean Station Pressure
   Sea Level Pressure
   Mean temperature
   Mean Vapor Pressure

   The above variables are expressed as follows:

Measured to the one tenth of a unit.
Actual value equals variable divided by 10.

5. If the Mean Sea Level Pressure is actually expressed then the indicator in column thirty-four is left blank.

If the sea level pressure field is used for the height of the eight hundred and fifty millibar (MB) pressure surface, the indicator is a (Y). If seven hundred millibar (MB), the indicator is a (Z).

6. Past precipitation totals for a particular month are listed in increasing order, regardless of date. The list is partitioned equally into five sections and quintiles. The top section (lowest totals) is candela one. Bottom is five. A precipitation total from a new data record is compared with the list. If the new precipitation total is lower or higher than any total on the list, it is assigned candela number zero to six, respectively. Otherwise, the new total is given the candela number of the section it would be placed in. When the past data are such that it is not clear what section to place the data in, the highest candidate section is chosen.

7. Sunshine Duration most often available from ocean ships reporting in CLIMAT SHIP format. These spaces are usually blank.

8. Indicates the current condition of the following two variables:
Mean Sea Surface Temperature
Departure of Mean Sea Surface Temperature from average

Expressed as follows:

Blank = The value is presumed good
Asterisk = The value is considered suspect
Pound(#) = The original value was deleted

9. The WMO Region Number are as follows:

1 = Africa
2 = Asia
3 = South America
4 = North America
5 = South-West Pacific
6 = Europe
7 = Antarctica
8 = Ship Stations

D. List of variables for UPPER AIR Data.

In an upper air record, the first thirty-two characters comprise the header information group. Afterwards is up to twelve flight levels, each represented by a thirty-nine character group. The groups normally consist of the surface level and nine upper air pressure levels:
Surface levels, 850, 700, 500, 300, 200, 150, 50, 30 millibar.

The Upper Air Record contains 500 bytes. Header information group the first 32 bytes of the record.

	ELEMENT	WIDTH	POSITION
001	Surface/Upper Air Designator	1	001
002	WMO Station Number	6	002-007
003	Data Period Type	1	008
004	Year	4	009-012
005	Month	2	013-014
006	Blank	6	015-020
007	WMO Region Number	1	021
008	Observation time Code (1, 2, 3, / or blank)	1	022
009	Number Levels	2	023-024
010	Not Used	8	025-032

Level group (level one is bytes 33-71 etc. out to maximum of 12 levels)

011	Level Quality Indicator	1	033
012	Pressure level at the surface	3	034-036
013	Height (gpm) of pressure level (If 2-4 is surface pressure (MB)	5	037-041
014	Number of Day temperature Observations Missing	2	042-043
015	Mean temperature (Celsius)	5	044-048
016	Mean Dew Point Temperature Depression	4	049-052
017	Number Day wind observations missing	2	053-054
018	Wind Steadiness Factor (%)	3	055-057
019	Mean Vector Wind Direction (Degrees)	3	058-060
020	Mean Vector wind Speed (MPS)	2	061-062
021	Flags (blank, *, or #1)	9	063-071

Level 2 is bytes 72 thru 110, ect. Out to maximum of 12 levels.

NOTES for UPPER AIR RECORD:

All variables are based on monthly means, except for precipitation which is based on a monthly total.

1. The Upper Air Designator indicates the following:

4 = Upper Air Current
5 = Upper Air Late Report
6 = Upper Air corrections

2. The Data Period Type indicates that the data represents a single month or some average of months. The following is the only date period type.

1 = A Single Month is Represented

3. There is space for a beginning year and month and an ending year and month of the data. For data period type one, the beginning year and month are sufficient, therefore bytes 15 thru 20 are blank.

4. The Observation Time Code is as follows:

1 = 00 hours GMT
2 = 12 hours GMT
3 = both
/ = other
blank = unknown

5. The Number of levels(bytes 23-24) can be up to 12 levels. The 10 standard levels are SFC, 850, 700, 500, 300, 200, 150,100, 50, and 30 MB. The records for the unreported levels are blank filled up to 12 levels.

6. Level quality indicator not used. The space is reserved for a later quality control module.

7. Indicates the current condition of the following two variables:
Mean Temperature
Mean Vector Wind Direction

Expressed as follows:

Measured to the nearest 1/10 of a unit.
The decimal point is omitted from this field.
Value = Variable divided by 10

8. The Mean Vector Wind Speed indicates the current condition of each element in the record.

Blank = Value is presumed good

Asterisk(*) = Value is suspect
Pound (#) = Original value was deleted, any value now given is presumed good.

The following is s suggested FORTRAN 77 code fragment to read the tape and set the data up for easy interpretation:

```
     CHARACTER*32 UPHEDR
     CHARACTER*39 UPLEVL (12)
     CHARACTER*100 SFCDAT (5)
     CHARACTER*500 DATA
     EQUIVALENCE (DATA, SFCDAT, UPHEDR)
     EQUIVALENCE (DATA (33:33), UPLEVL)

     READ (1, 1001, END=999) DATA
101  FORMAT (A500)
```

One can test DAT(1:1), which is surface/upper air indicator, after doing READ.

5. Access Method and Sort for Supplied Data:

MANUAL AND TAPE NOTATIONS

1. File Fixed Length

A. Physical Characteristics

Data in this file are retained in chronological order by stations. TD3500 data can be provided on magnetic tape sturctured as follows;

NCDC Library Tapes are structured as follows:

Record Length	: Fixed 500 Character
Block	: Fixed 5000 Character
Media	: ASCII 18-Track IBM 3480 Cartridges
Density	: 36,000 BPI
Parity	: Odd
Label	: ANSI Standard Labeled
File	: 1 File per Cartridge

B. COBOL or FORTRAN Description

(1) Typical ANSI COBOL

```
 IDENTIFICATION DIVISION.
 PROGRAM-ID. CRDWT3500.
* This Program Reads TD3500 Data and lists it on a
* printer.
 ENVIRONMENT DIVISION.
 CONFIGURATION SECTION.
 SOURCE-COMPUTER.  UNIVAC-1100.
 OBJECT-COMPUTER.  UNIVAC-1100.
 INPUT-OUTPUT SECTION.
 FILE-CONTROL.
   SELECT INDATA ASSIGN TO INTERCHANGE.
 DATA DIVISION.
 FILE SECTION.
 FD INDATA
    LABEL RECORDS ARE STANDARD
    RECORDING MODE IS F
    BLOCK CONTAINS 5000 CHARACTERS
    DATA RECORD IS DATA-RECORD CONTAINS
    100 CHARACTERS.


 01 DATA-RECORD.  (SURFACE DATA ONLY)
    02 RECORD-ID.
       03 SFC-DES      PIC X.
       03 WMO-STA      PIC X(6).
       03 PERIOD       PIC X.
       03 YEAR         PIC X(4).
       03 MONTH        PIC X(2).
       03 FILLER       PIC X(6).
       03 WMO-REGION   PIC X.
       03 DAYS-OBS     PIC X(2).
       03 STA-PRESS    PIC X(5).
       03 SEA-LEV-PRES PIC X(5).
       03 IND-SEA-LEV  PIC X.
       03 MEAN-TEMP    PIC X(4).
       03 DEP-MEAN     PIC X(5).
       03 MEAN-VAPOR   PIC X(3).
       03 DEP-VAPOR    PIC X(4).
       03 DAY-PRECIP   PIC X(2).
       03 TOTAL-PRECIP PIC X(4).
       03 DEP-PRECIP   PIC X(5).
       03 PREC-QUINT   PIC X.
       03 SUN-DURAT    PIC X(3).
       03 SUN-PERC     PIC X(3).
       03 MEAN-SEA     PIC X(4).
       03 DEP-MEN-SEA  PIC X(4).
       03 FLAGS        PIC X(8).
       03 FILLER       PIC X(16).
*
```

```
       WORKING-STORAGE SECTION.
      *
       01 RECORD-CT          PIC 9(5) COMP.
       01 PRCT               PIC 9(5) COMP.
      *
       PROCEDURE DIVISION.
      *
       OPENING.
           OPEN INPUT INDATA.
       READ-REC.
           READ INDATA AT END GO TO ENDALL.
           ADD 1 TO RECORD-CT.
           DISPLAY RECORD-ID UPON PRINTER.
           MOVE 0 TO PRCT.
           PERFORM PRINT-A-RECORD UNTIL EOF.
       PRINT-A-RECORD.
           ADD 1 TO PRCT.
       ENDALL.
           DISPLAY 'E N D OF R U N' UPON PRINTER.
           CLOSE INDATA.
           STOP RUN.
```

(2) TYPICAL FORTRAN 77

```
       CHARACTER*32 UPHEDR
       CHARACTER*39 UPLEVL (12)
       CHARACTER*100 SFCDAT (5)
       CHARACTER*500 DATA
       EQUIVALENCE (DATA, SFCDAT, UPHEDR)
       EQUIVALENCE (DATA (33:33), UPLEVL)

       READ (1, 1001, END=999) DATA
  101  FORMAT (A500)
```

B. FORMAT (FIXED RECORD)

For surface data, each 500 character physical record contains five 100 character logical records. There may be several empty surface records (filled with M's) in the last record containing surface data.

C. List of Variables for Surface Record

	ELEMENT	WIDTH	POSITION
001	SURFACE & Upper Air Designator	1	001
002	WMO Station Number	6	002-007

003	Data Period Type	1	008
004	YEAR	4	009-012
005	MONTH	2	013-014
006	BLANK	6	015-020
007	WMO Region Number	1	021-021
008	Number Days Observations Taken	2	022-023
009	Mean Station Pressure (millibar)	5	024-028
010	Mean Sea Level Pressure (mb) (850 or 700 millibar Level (GPM)	5	029-033
011	Indicator Mean Sea Level Pressure (Blank, Y or Z)	1	034
012	Mean Temperature (Celsius)	4	035-038
013	Departure Mean Temperature Average	5	039-043
014	Mean Vapor Pressure (mb)	3	044-046
015	Departure Vapor Pressure Average(mb)	4	047-050
016	Number Day with Precipitation (1 mm or greater)	2	051-052
017	Total Precipitation (mm)	4	053-056
018	Departure Precipitation Average (mm)	5	057-061
019	Precipitation Quintile	1	062
020	Sunshine Duration (Hours)	3	063-065
021	Sunshine Percent Long-term Average(%)	3	066-068
022	Mean Sea Surface Temperature (Or Blank)	4	069-072
023	Departure Mean Sea Surface Temperature from Average	4	073-076
024	Flags (blank, * or #1)	8	077-084
025	Not Used	16	085-100

D. List of variables for UPPER AIR Data.

In an upper air record, the first thirty-two characters comprise the header information group. Afterwards is up to twelve flight levels, each represented by a thirty-nine character group. The groups normally consist of the surface level and nine upper air pressure levels: srface, 850, 700, 500, 300, 200, 150, 50, 30 millibars.

The Upper Air Record contains 500 bytes. Header information group the first 32 bytes of the record.

	ELEMENT	WIDTH	POSITION
001	Surface/Upper Air Designator	1	001
002	WMO Station Number	6	002-007
003	Data Period Type	1	008
004	Year	4	009-012
005	Month	2	013-014
006	Blank	6	015-020

007	WMO Region Number	1	021
008	Observation time Code (1, 2, 3, / or blank)	1	022
009	Number Levels	2	023-024
010	Not Used	8	025-032

Level group (level one is bytes 33-71 etc. out to maximum of 12 levels)

011	Level Quality Indicator	1	033
012	Pressure level at the surface	3	034-036
013	Height (gpm) of pressure level (If 2-4 is surface pressure (MB)	5	037-041
014	Number of Day temperature Observations Missing	2	042-043
015	Mean temperature (c)	5	044-048
016	Mean Dew Point Temperature Depression	4	049-052
017	Number Day wind observations missing	2	053-054
018	Wind Steadiness Factor (%)	3	055-057
019	Mean Vector Wind Direction (Degrees)	3	058-060
020	Mean Vector wind Speed (MPS)	2	061-062
021	Flags (blank, *, or #1)	9	063-071

Level 2 is bytes 72 thru 110, ect. Out to maximum of 12 levels.

6. Element Names and Definitions:

a. SURFACE & UPPER AIR DESIGNATOR:

(Surface, Upper Air) The designator indicates whether the data are surface or upper air, and which of three types of reports the data represent. The designator has one of the following values:

1 = Surface current
2 = Surface late report
3 = Surface corrections
4 = Upper Air current
5 = Upper Air late report
6 = Upper Air corrections

b. WMO STATION NUMBER:

(Surface, Upper Air) The WMO stations numbers are assigned by the World Meteorological Organization. A complete list is published in the WMO Publication Number 9, Volume A - Stations.

c. DATA PERIOD TYPE:

(Surface, Upper Air) The data period type indicates whether the data is a single month or some average of months. The present system only allows a single month.

d. YEAR:

(Surface, Upper Air) Year of record.

e. MONTH:

(Surface, Upper Air) Month of record. Range = 01 - 12.

f. WMO REGION NUMBER:

(Surface, Upper Air)

1 = Africa
2 = Asia
3 = South America
4 = North America
5 = South-West Pacific
6 = Europe
7 = Antarctica
8 = Ship Stations

g. NUMBER OF DAYS OBSERVATIONS TAKEN:

(Surface) The number of days observations were taken during the month of data.

h. MEAN STATION PRESSURE:

(Surface) Mean station pressure is the mean station atmospheric pressure for the month of record, expressed in millibars to the nearest tenth.

i. MEAN SEA LEVEL PRESSURE:

(Surface) Mean sea level pressure is the mean sea level pressure for the month of record as computed for the station, expressed in tenths of a millibar. For high-altitude stations, the height of a standard pressure level (whole gpm) is normally given instead: If a Y appears at the right side of the value, the value is understood to be the height of the 850 millibar pressure level. If a Z appears, it is the 700 millibar level, instead.

j. MEAN TEMPERATURE:

(Surface) Mean temperature is the monthly mean of temperature for the month of record. Mean temperature is expressed in tenths of a degree Celsius.

k. DEPARTURE OF MEAN TEMPERATURE FROM AVERAGE:

(Surface) Temperature departure is the result of subtracting a long-term average temperature for the same month from the above mean temperature.

l. MEAN VAPOR PRESSURE:

(Surface) Vapor pressure is the amount of atmospheric pressure due to water vapor alone. Mean vapor pressure is the mean for the month of record. Units are tenths of a millibar.

m. DEPARTURE OF MEAN VAPOR PRESSURE FROM AVERAGE:

(Surface) Vapor pressure departure is the result of subtracting a long-term average vapor pressure for the month of record from the current mean value.

n. NUMBER OF DAYS WITH PRECIPITATION:

(Surface) The number of days with precipitation of one millimeter or greater.

o. TOTAL PRECIPITATION:

(Surface) All precipitation for the month is totalled. The total is expressed in whole millimeters.

p. DEPARTURE OF TOTAL PRECIPITATION FROM AVERAGE:

(Surface) Precipitation departure is the result of subtracting a long-term average precipitation total for the month of record from the current total precipitation value.

q. PRECIPITATION QUINTILE:

(Surface) All past precipitation totals for the month of record, and the current total, are listed in order of increasing amounts; the list is divided into five equal sections; precipitation quintile is the section number, 1 - 5, that the current total appears in.

However, a current total lower than any other total is assigned 0; and a current total higher than any other total is assigned 6.

r. SUNSHINE DURATION:

(Surface) Sunshine duration is given in whole hours.

s. SUNSHINE PERCENT OF LONG-TERM AVERAGE:

(Surface) Sunshine percent of long-term average is the result of dividing sunshine duration by a long-term average sunshine duration for the month of record, and multiplying the result by 100 percent.

t. MEAN SEA SURFACE TEMPERATURE:

(Surface) The mean sea surface temperature is the monthly mean air temperature from the present month and year. Temperatures are expressed in tenths of a degree Celsius.

u. DEPARTURE OF MEAN SEA SURFACE TEMPERATURE FROM AVERAGE:

(Surface) The temperature departure is the result of subtracting a long-term average temperature for the month from the mean temperature.

v. OBSERVATION TIME CODE:

(Upper Air)

1 = 00 Hours GMT
2 = 12 Hours GMT
3 = Both
/ = Other
Blank = Unknown

w. NUMBER OF LEVELS:

(Upper Air) The number of levels can be up to 12. The ten standard levels are SFC, 850, 700, 500, 300, 200, 150, 100, 50, and 30 millibars. The upper air records for unreported levels are blank and filled up to 12 levels.

x. LEVEL QUALITY INDICATOR:

(Upper Air) Level quality indicator is not used. This

space is reserved for a future quality control module.

y. PRESSURE LEVEL AT THE SURFACE:

(Upper Air) The pressure level at the surface is expressed in the standard pressure levels, SFC, 850, 700, 500, 300, 200, 150, 100, 50, and 30 millibars.

z. HEIGHT OF PRESSURE LEVEL:

(Upper Air) The height of pressure level is the station elevation if the pressure level is SFC. Otherwise it is the height (gpm) of a standard pressure level.

aa. NUMBER OF MISSING DAYS OF TEMPERATURE:

(Upper Air) Number of missing days of temperature is the number of days in the data month in which no temperature data are available for each pressure level.

ab. MEAN TEMPERATURE FOR UPPER AIR:

(Upper Air) Mean temperature is the monthly mean temperature for the present month and year at each pressure level. Units are tenths of a degree.

ac. MEAN DEW POINT TEMPERATURE DEPRESSION:

(Upper Air) Mean dew point temperature depression is the difference between the monthly mean temperature and the monthly mean dew point temperature at each pressure level.

ad. NUMBER OF DAYS WIND OBSERVATIONS MISSING:

(Upper Air) The number of missing days of mean vector wind is the number of days in the data month for which no wind data are available at each level.

ae. WIND STEADINESS FACTOR:

(Upper Air) The wind steadiness factor is the ratio of the monthly mean vector wind speed to the monthly mean scalar wind speed for the current month and year.

af. MEAN VECTOR WIND DIRECTION:

(Upper Air) The direction of the mean vector wind is the compass direction, in degrees zero to 359, from

which the wind blew, of the resultant wind for the month.

ag. MEAN VECTOR WIND SPEED:

(Upper Air) The mean vector wind speed is the speed of the month's resultant wind.

7. Start Date: January 1986

8. Stop Date: Present

9. Coverage:

a. Southernmost Latitude: 90S
b. Northernmost Latitude: 90N
c. Westernmost Longitude: 180W
d. Easternmost Longitude: 180E

10. Location: Global

11. Keywords:

a. Meteorology
b. Climatology
c. TD-3500
d. 3500
e. Surface
f. Upper Air
g. Temperature
h. Pressure
i. Vapor Pressure
j. Precipitation
k. Sunshine
l. Sea Surface
m. Dew Point
n. Wind

12. How to Order Data:

The data are available for purchase from the National Climatic Data Center, Climate Service Branch, Federal Building, 151 Patton

Avenue, Asheville, NC 28801-5001, phone number (828) 271-4800.

13. Archiving Data Center:

National Climatic Data Center
NOAA/NESDIS/NCDC
Federal Building
151 Patton Avenue
Asheville, NC 28801-5001

14. Technical Contact:

Climate Services Division
Federal Building
151 Patton Avenue
Asheville, NC 28801-5001

15. Known Uncorrected Problems: No information available

16. Quality Statement: No information available

17. Revision Date: 19970616

18. Source Data Sets: None

19. Essential Companion Data Sets:

a. World Meteorological Organization (WMO) Publication No. 9, Volume A (digital version).

20. Derived Data Sets:

a. World Weather Surface Records (TD9645)
b. World Weather Upper Air Records (TD9648)

21. References: None

22. Summary:

The National Climatic Data processes international electronic transmissions in CLIMAT (surface land station format), CLIMAT SHIP (ocean ship format) and CLIMAT TEMP (upper air format), for the purpose of building a surface/upper air data base and publishing the Monthly Climatic Data for the World bulletin. Approximately 1200 surface and 500 upper air stations are processed. These data are used in agricultural and energy assessment activities, in crop yield model development, and in the analysis of global atmospheric and regional climatic variations. The National Center for Atmospheric Research (NCAR) produces the data sets TD9645 and TD9648, which are also archived at NCDC, from the MCDW annual. (This data set contains data from 1986 onward. The data sets listed under “20. Derived Data Sets:”, however, contain other data from as early as 1731.)